

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA23 | Balsall Common and Hampton-in-Arden
Construction assessment (SV-003-023)
Sound, noise and vibration

November 2013

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Department
for Transport

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Appendix SV-003-023

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Construction assessment	003
Community forum area:	Balsall Common and Hampton-in-Arden	023

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1 Introduction

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Balsall Common and Hampton-in-Arden community forum area (CFA23), the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-023);
 - construction sound, noise and vibration (Volume 5: Appendix SV-003-023) (this appendix); and
 - operational sound, noise and vibration (Volume 5: Appendix SV-004-023).
- 1.1.3 The outcomes of the assessment are summarised in Volume 2: CFA23 Report, Chapter 11 Sound, noise and vibration.
- 1.1.4 Maps referred to throughout the sound, noise and vibration appendices are contained in the Volume 5: Map Book Sound, noise and vibration.
- 1.1.5 This appendix presents the likely noise and vibration impacts, effects and significant effects arising from the construction of the Proposed Scheme for the Balsall Common and Hampton-in-Arden area on:
- people, primarily where they live ('residential receptors') in terms a) individual dwellings and b) on a wider community basis, including any shared community open areas; and
 - community facilities such as schools, hospitals, places of worship, and also commercial properties such as offices and hotels, collectively described as 'non-residential receptors' and 'quiet areas'.
- 1.1.6 The assessment of likely impacts, effects and significant effects from construction noise and vibration on agricultural, community, ecological or cultural heritage receptors and the assessment of tranquillity are presented in the following documents:
- Agriculture, forestry and soils assessment (Volume 5: Appendix AG-001-023)
 - Community data (Volume 5: Appendix CM-001-023)
 - Ecology (Volume 5: Appendix EX-001-004, Appendix EC-002-004, EC-003-004 and Appendix EC-005-004)
 - Cultural Heritage impact assessment table (Volume5: Appendix CH-003-023);and
 - Landscape and Visual (Volume5: Appendix LV-001-023)

1.2 Evaluation of impacts and effects

- 1.2.1 This appendix provides a quantitative assessment of construction noise and vibration impacts/effects and a qualitative assessment of likely significant effects, based on the

impacts/effects identified and other local context information consistent with the scope and methodology defined for the Proposed Scheme.

- 1.2.2 Indirect effects arising from temporary changes in traffic patterns on the existing road network as a consequence of constructing the Proposed Scheme are also reported in this appendix, where they are likely to occur within the study area as defined in Volume 5: Appendix SV-001-000.
- 1.2.3 In undertaking the assessment of sound and vibration, consistent with Environmental Impact Assessment (EIA) Regulations (see Volume 1, Section 1.3) and emerging National Planning Practice Guidance¹ a differentiation between impacts, effects, adverse effects and significant effects is made. Further information is provided in Volume 5: Appendix SV001-000.
- 1.2.4 The assessment of impacts and effects has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. The assessment locations employed in this assessment are presented on map series Sv-03 in the CFA23 Volume 5: Sound, noise and vibration map book.

¹ Information is provided in the Department for Communities and Local Government's emerging National Planning Practice Guidance – Noise <http://planningguidance.planningportal.gov.uk>, (refer to the noise exposure hierarchy), as available on 14th October 2013

2 Scope, assumptions and limitations

2.1 Regional and local policy guidance

2.1.1 The policy framework for sound, noise and vibration is set out in Volume 1 and in Volume 5: Appendix SV-001-000. As part of the engagement with local authorities through the Planning Forum Sub Group - Acoustics, information regarding any specific local planning guidance in respect of noise and vibration has been requested. Whilst no information has been received for this study area via the Planning Forum Sub Group - Acoustics, the following local policy guidance on noise and vibration has been identified:

- The Solihull Unitary Development Plan (Feb 2006)²;
- Solihull Draft Local Plan (Sept 2012)³; and
- The North Warwickshire Local Plan (July 2006)⁴.

2.1.2 This guidance has been considered as part of formulating the detailed application of the impact and significance criteria set out in Volume 5: Appendix SV-001-000.

2.2 Engagement

2.2.1 Details of engagement on a route-wide basis with the local and county authorities' Environmental Health Practitioners via the Planning Forum Sub Group - Acoustics, is set out in Volume 1.

2.2.2 Engagement with communities has been via the Community Forums, as set out in Volume 1. In respect of sound, noise and vibration the following discussions have taken place:

- general discussions in respect of local issues, including possible ways to avoid and mitigate the potential impacts of noise or vibration;
- September / October 2012; a specific presentation about sound, noise and vibration with discussion afterwards with one of the project team specialists;
- November / December 2012; specific request for the Community Forum to propose baseline sound monitoring locations;
- January / February 2013; feedback to the Community Forum on any proposed baseline monitoring locations; and
- verbal / written response to questions and sound, noise and vibration.

² Solihull Metropolitan Borough Council (SMBC), (2006), Solihull Unitary Development Plan 2006, SMBC, Solihull

³ Solihull Metropolitan Borough Council (SMBC), (2012), Solihull Draft Local Plan 2012, SMBC, Solihull

⁴ North Warwickshire Borough Council (NWBC), (2006), North Warwickshire Local Plan, NWBC

2.3 Methodology

- 2.3.1 The methodology used for the assessment of airborne sound, ground-borne sound and vibration impacts and the determination of significant effects is defined in the Scope and Methodology Report (SMR) (see Volume 5: Appendix CT-001-000/1), is clarified in a number of areas by the SMR Addendum (see Volume 5: Appendix CT-001-000/2). Further information is contained in Volume 5: Appendix SV-001-000.

2.4 Assumptions

- 2.4.1 Route-wide assumptions are outlined in Volume 1 and are further detailed in Volume 5: Appendix SV-001-000. Local assumptions that apply to the assessment of construction sound noise and vibration within this area are set out in Volume 2, Balsall Common and Hampton-in-Arden (CFA Report 23), Section 11.

2.5 Limitations

- 2.5.1 The route-wide limitations and the approach adopted to assure that they will not impact the robust assessment of sound, noise and vibration are presented in Volume 5: Appendix SV-001-000. No specific additional limitations are identified for this study area.

3 Environmental Baseline

Existing baseline

- 3.1.1 Baseline sound level data has been collected at locations representative of the airborne sound-sensitive receptors. The existing and future baseline airborne sound levels derived from these measurements are given in Volume 5: Appendix SV-002-023. Details of the baseline data collection and the methodology are given in Volume 5: Appendix SV-001-000 and specifically for this study area in Volume 5: Appendix SV-002-023.

Future baseline

- 3.1.2 The assessment of noise from construction activities assumes a baseline year of 2017 which represents the period immediately prior to the start of the construction period. As a reasonable worst case, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017. The assessment of noise from construction traffic assumes a baseline year of 2021, representative of the middle of the construction period when the construction traffic flows are expected to be at their peak. Further information can be found in the Traffic and transport assessment (Volume 5: Appendix TR-001-023).

4 Effects arising during construction

4.1 Introduction

4.1.1 The assessment is reported first for ground-borne vibration and then for airborne sound. Under each of these headings, the results of the quantitative identification of impacts and effects are presented. This is followed by the identification of significant effects and the evidence used to support these conclusions.

4.1.2 The structure of this assessment report is:

- avoidance and mitigation measures;
- quantitative identification of impact and effects:
 - ground-borne vibration;
 - residential; and
 - non-residential.
 - airborne sound;
 - residential; and
 - non-residential.
- assessment of impacts and effects:
 - residential receptors: direct effects – dwellings;
 - residential receptors: direct effects – communities;
 - residential receptors: indirect effects;
 - non-residential receptors: direct effects;
 - non-residential receptors: indirect effects; and
 - cumulative effects from the proposed scheme and other committed development.

4.2 Avoidance and mitigation measures

4.2.1 These are set out in, Volume 2, Balsall Common and Hampton-in-Arden (CFA Report 23), Section 11.

4.3 Quantitative identification of impacts and effects

Ground-borne vibration

4.3.1 Assessment locations defined for the quantitative assessment of impacts are shown on Map series SV-03 in the Volume 5, Map Book Sound, noise and vibration.

4.3.2 For each Assessment Location, the assessment results for residential and non-residential receptors are presented in Table 1 and Table 2. Explanation of the

information in Table 1 and Table 2 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:

	Where the significant effect column is highlighted, then a significant effect is identified at the referenced community, or individual receptor
*	Significant effect – the quantitative impact methodology has identified either: <ol style="list-style-type: none"> 1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or 2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect
~	Significant effect - The forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000)
A	Type of effect – adverse effect
S	Type of effect – significant adverse effect
NA	Type of effect – generally no adverse effect
B	Type of effect – for non-residential receptors further detail about the type of effect is set out in the text of Volume 5: Appendix SV-001-000
R	Type of receptor - residential
V1	Type of receptor – (V1) vibration sensitive research and manufacturing, hospital, and university equipment, (V2) hotels, hospital wards and education dormitories, (V3) offices, schools and places of worship, (V4) workshops
T	Receptor design – typical
S	Receptor design - special

Appendix SV-003-023

Table 1: Assessment of construction induced ground-borne vibration at residential receptors

Assessment location		Impact criteria			Significance criteria										Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s ^{1.75}]		Construction activity resulting in highest forecast vibration levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
172965	Truggist Lane, Berkswell, Coventry	0.42	0.16/0.16	-	Earthworks	NA	1	R	T	-	-	N	-	-	
173225	Truggist Lane, Berkswell, Coventry	0.42	0.16/0.16	-	Earthworks	NA	2	R	T	-	-	N	-	-	
173192	Truggist Lane, Berkswell, Coventry	0.51	0.19/0.19	-	Earthworks	NA	2	R	T	-	-	N	-	-	
168004	Lavender Hall Lane, Berkswell, Coventry	0.25	0.10/0.10	-	Earthworks	NA	5	R	T	-	-	N	-	-	
182461	Marsh Farm and Mercote Cottages , A452 Kenilworth Road, Hampton-In-Arden, Solihull	0.24	0.08/0.11	-	Earthworks	NA	3	R	T	-	-	N	-	-	
181687	Arden House, A452 Kenilworth Road, Hampton-In-Arden, Solihull	0.14	0.06/0.06	-	Earthworks	NA	1	R	T	-	-	N	-	-	
700556	Mercote Lodge and Hornbrook Cottage, A452 Kenilworth Road, Balsall Common	1.12	0.33/0.33	-	Earthworks	A	2	R	T	-	-	Y	6	-	CSV23-Co3
181976	Patrick Farm, B4102 Meriden Road, Hampton-	1.12	0.09/0.40	-	Earthworks	A	1	R	T	-	-	Y	12	-	~

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s ^{-1.75}]		Construction activity resulting in highest forecast vibration levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
	In-Arden, Solihull														
176243	Pasture Farm, Diddington Lane, Hampton-in-Arden	0.19	0.08/0.08	-	Earthworks	NA	1	R	T	-	-	N	-	-	

Appendix SV-003-023

Table 2: Assessment of construction induced ground-borne vibration at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	PPV [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s ^{1.75}]		Construction activity resulting in highest forecast vibration levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
168004	Fisheries café and office, Lavender Hall Lane	0.25	0.10/0.10	-	Earthworks	B	1	V ₃	T	-	-	N	-	-	
181687	Lincoln Farm café and offices, A452 Kenilworth Road, Hampton-In-Arden, Solihull	0.14	0.06/0.06	-	Earthworks	B	1	V ₃	T	-	-	N	-	-	
181976	Commercial units, Patrick Farm, B4102 Meriden Road, Hampton-In-Arden, Solihull	1.12	0.09/0.40	-	Earthworks	B	9	V ₃	T	-	-	N	-	-	
176243	Commercial units, Pasture Farm, Diddington Lane, Hampton-in-Arden	0.19	0.08/0.08	-	Earthworks	B	3	V ₃	T	-	-	N	-	-	

Airborne sound: direct impacts and effects


4.3.3 Activities associated with the construction phases of the Proposed Scheme will generate airborne noise. The assessment of the likely impacts and significant effects as a result of the construction noise has considered the effects on:

- residential receptors, both as individual dwellings and communities; and
- non-residential receptors, including quiet areas.

For each type of receptor, subject to the screening distances identified, and based upon supplied plant information from engineers, the typical and highest monthly $L_{Aeq,T}$ noise levels from construction activities have been calculated at the façade of all assessment locations, which are representative of a number of receptors in the study area.

4.3.4 The assessment results, impact criteria and significance criteria for the assessment of the scheme at residential and non-residential receptors are presented in Table 3 and Table 4 respectively.

4.3.5 Explanation of the information within Table 3 and Table 4 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:

 Where the significant effect column is highlighted, then a significant effect is identified at the referenced community, or individual receptor

* Significant effect – the quantitative impact methodology has identified either:

1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or

2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect

~ Significant effect - The forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000)

A Type of effect – adverse effect

S Type of effect – significant adverse effect

NA Type of effect – generally no adverse effect

B Type of effect – for non-residential receptors further detail about the type of effect is set out in the text of Appendix 5: SV-001-000

R Type of receptor - residential

G Type of receptor - (G1) theatres, large auditoria and concert halls, (G2) sound recording and broadcast studios, (G3) places of meeting for religious worship, courts, cinemas, lecture theatres, museums and small auditoria or halls, (G4) schools, colleges, hospitals, hotels and libraries, and (G5) offices and general commercial premises

T Receptor design – typical

S Receptor design - special

H Existing environment – high existing ambient noise levels, day >75 dB, evening >65 dB or night >55 dB L_{pAeq} at the facade

- L Existing environment – low existing ambient noise levels, day and evening ≤ 45 dB, or night ≤ 35 dB L_{pAeq} at the facade
- D,E,N Impact duration (months) – duration of impact during the day (D), evening (E) or night (N)
- NI Mitigation effect - identified as likely to qualify for noise insulation under the draft CoCP

Table 3: Assessment of construction noise at residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
98826	Old Station Road, Hampton-In-Arden, Solihull	50/58 [B]	44/48 [C]	44/48 [C]	Day: Vegetation clearance; Eve: Road construction; Night: Road construction	NA	11	R	T	H	-	N	-	-	
158820	Riddings Hill, Balsall Common, Coventry	49/54 [A]	-	39/41 [A]	Day: Filling; Night: Install railway protection barrier	NA	37	R	T	-	-	N	-	-	
159179	Grovefield Crescent, Balsall Common, Coventry	47/51 [A]	-	37/39 [A]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	62	R	T	-	-	N	-	-	
160582	Station Road, Balsall Common, Coventry	55/60 [B]	-	44/46 [C]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	33	R	T	H	-	N	-	-	
161143	Marsh Lane, Bradnocks Marsh, Solihull	49/53 [A]	-	-	Day: Earthworks	NA	3	R	T	-	-	N	-	-	
161181	Marsh Lane, Bradnocks Marsh, Solihull	53/58 [A]	-	-	Day: Earthworks	NA	5	R	T	-	-	N	-	-	
161197	Marsh House Farm Lane, Bradnocks Marsh, Solihull	48/53 [A]	-	-	Day: Vegetation clearance	NA	1	R	T	H	-	N	-	-	
161290	Wootton Lane, Balsall Common, Coventry	45/50 [A]	-	-	Day: Vegetation clearance	NA	1	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
161370	Wootton Green Lane, Balsall Common, Coventry	48/54 [A]	-	-	Day: Vegetation clearance	NA	5	R	T	-	-	N	-	-	
161426	Holly Acre Lodge, A452 Kenilworth Road, Hampton-In-Arden, Solihull	58/67 [A]	-	-	Day: Utility diversions	A	1	R	T	-	-	N	D 2	-	~
161465	A452 Kenilworth Road, Hampton-In-Arden, Solihull	53/60 [C]	-	-	Day: Vegetation clearance	NA	4	R	T	H	-	N	-	-	
161483	Bibury House and Marsh Cottage, A452 Kenilworth Road, Hampton-In-Arden, Solihull	60/69 [A]	-	-	Day: Utility diversions	A	2	R	T	H	-	N	D 3	-	CSV23-Co3
161504	Bradnocks Marsh Lane, Hampton-In-Arden, Solihull	44/50 [C]	-	-	Day: Vegetation clearance	NA	5	R	T	H	-	N	-	-	
161734	A452 Kenilworth Road, Hampton-In-Arden, Solihull	55/60 [A]	-	-	Day: Vegetation clearance	NA	8	R	T	-	-	N	-	-	
164673	Wootton Green Lane, Balsall Common, Coventry	46/52 [A]	-	<35/<35 [A]	Day: Topsoil strip; Night: Carol Green Rail underbridge wing walls	NA	25	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
164793	A452 Kenilworth Road, Balsall Common, Coventry	46/52 [C]	-	<35/<35 [C]	Day: Lavender Hall Lane overbridge pile breakdown; Night: Install railway protection barrier	NA	25	R	T	H	-	N	-	-	
164857	A452 Kenilworth Road, Balsall Common, Coventry	48/55 [A]	-	<35/<35 [A]	Day: Vegetation clearance; Night: Carol Green Rail underbridge wing walls	NA	23	R	T	-	-	N	-	-	
164947	A452 Kenilworth Road, Balsall Common, Coventry	47/54 [A]	-	<35/<35 [A]	Day: Vegetation clearance; Night: Carol Green Rail underbridge wing walls	NA	79	R	T	L	-	N	-	-	
167012	Ashley Way, Balsall Common, Coventry	<40/43 [A]	-	<35/<35 [B]	Day: Carol Green Rail underbridge pile breakdown; Night: Carol Green Rail underbridge concrete box	NA	37	R	T	-	-	N	-	-	
167652	Wilmot Close, Balsall Common, Coventry	48/56 [A]	-	<35/<35 [C]	Day: Lavender Hall Lane overbridge pile breakdown; Night: Balsall Common viaduct deck	NA	7	R	T	-	-	N	-	-	
167669	Whitehead Grove, Balsall Common, Coventry	<40/44 [A]	-	<35/<35 [B]	Day: Vegetation clearance; Night: Carol Green Rail underbridge concrete box	NA	181	R	T	-	-	N	-	-	
167728	Top Lodge, A452 Kenilworth Road, Balsall Common, Coventry	56/62 [A]	-	-	Day: Fencing	NA	1	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
167743	Wootton Lane, Balsall Common, Coventry	51/59 [A]	-	-	Day: Fencing	NA	3	R	T	-	-	N	-	-	
167781	Final Home, Park Lane, Berkswell, Coventry	60/65 [A]	-	-	Day: Vegetation clearance	NA	1	R	T	-	-	N	-	-	
167793	Wootton Green Lane, Balsall Common, Coventry	51/56 [A]	-	-	Day: Vegetation clearance	NA	1	R	T	-	-	N	-	-	
167824	Lodge Farm, A452 Kenilworth Road, Balsall Common, Coventry	52/64 [A]	-	-	Day: Vegetation clearance; Night: Balsall Common viaduct deck	NA	4	R	T	-	-	N	-	-	
167944	A452 Kenilworth Road, Balsall Common, Coventry	51/59 [C]	-	-	Day: Vegetation clearance; Night: Balsall Common viaduct deck	NA	9	R	T	H	-	N	-	-	
168004	Lavender Hall Lane, Berkswell, Coventry	60/70 [A]	-	<35/<35 [B]	Day: Utility removal, Lavender Hall Lane; Night: Carol Green Rail underbridge wing walls	A	5	R	T	-	-	N	D 6	-	CSV23-Co2
168133	B4102 Meriden Road, Berkswell, Coventry	45/50 [A]	-	-	Day: Vegetation clearance	NA	11	R	T	-	-	N	-	-	
168832	Waste Lane, Balsall Common, Coventry	48/52 [A]	-	35/38 [B]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	46	R	T	-	-	N	-	-	
170892	Barretts Lane, Balsall	50/55 [A]	-	41/43 [A]	Day: Filling; Night: Carol Green Rail	NA	13	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Common, Coventry				underbridge concrete box										
171148	Barretts Lane, Balsall Common, Coventry	50/54 [A]	-	37/39 [B]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	1	R	T	-	-	N	-	-	
171253	Meeting House Lane, Balsall Common, Coventry	47/53 [A]	-	38/41 [C]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	45	R	T	-	-	N	-	-	
171441	Kelsey Lane, Balsall Common, Coventry	47/51 [A]	-	36/39 [B]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	39	R	T	-	-	N	-	-	
172124	Meeting House Lane, Balsall Common, Coventry	45/49 [A]	-	35/36 [A]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	23	R	T	-	-	N	-	-	
172177	Station Road, Balsall Common, Coventry,	43/48 [B]	-	<35/<35 [C]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	8	R	T	H	-	N	-	-	
172357	Station Road, Balsall Common, Coventry	50/54 [B]	-	40/42 [C]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	25	R	T	H	-	N	-	-	
172441	Sunnyside Lane, Balsall Common, Coventry	50/54 [A]	-	40/42 [A]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	47	R	T	-	-	N	-	-	
172667	Sunnyside Lane, Balsall	46/51 [A]	-	36/38 [A]	Day: Earthworks; Night: Carol Green Rail	NA	25	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Common, Coventry				underbridge concrete box										
172826	Sunnyside Lane, Balsall Common, Coventry	52/57 [A]	-	42/44 [B]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	16	R	T	-	-	N	-	-	
172901	Station Road, Balsall Common, Coventry	54/59 [B]	-	44/46 [C]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	7	R	T	H	-	N	-	-	
172944	Station Road, Balsall Common, Coventry	58/63 [A]	-	45/47 [C]	Day: Earthworks; Night: Install railway protection barrier	NA	2	R	T	-	-	N	-	-	
172965	Truggist Lane, Berkswell, Coventry	64/71 [A]	-	49/53 [C]	Day: Earthworks; Night: Install railway protection barrier	A	1	R	T	-	-	N	D 16	-	CSV23-Co1
173014	Station Road, Balsall Common, Coventry	47/52 [A]	-	36/38 [A]	Day: Earthworks; Night: Install railway protection barrier	NA	21	R	T	L	-	N	-	-	
173082	Station Road, Balsall Common, Coventry	48/52 [A]	-	35/37 [A]	Day: Earthworks; Night: Install railway protection barrier	NA	14	R	T	-	-	N	-	-	
173151	Station Road, Balsall Common, Coventry	55/60 [A]	-	42/44 [C]	Day: Earthworks; Night: Install railway protection barrier	NA	2	R	T	-	-	N	-	-	
173170	Station Road, Balsall	54/59 [A]	-	38/39 [C]	Day: Vegetation clearance; Night: Carol Green Rail	NA	2	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Common, Coventry				underbridge concrete box										
173192	Truggist Lane, Berkswell, Coventry	63/69 [A]	-	37/44 [C]	Day: Vegetation clearance; Night: Install railway protection barrier	A	2	R	T	-	-	N	D 14	-	CSV23-Co1
173225	Truggist Lane, Berkswell, Coventry	60/68 [A]	-	<35/35 [B]	Day: Earthworks; Night: Install railway protection barrier	A	2	R	T	-	-	N	D 8	-	CSV23-Co1
173259	Beverley Close, Balsall Common, Coventry	54/59 [A]	-	44/46 [B]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	13	R	T	-	-	N	-	-	
173395	Station Road, Balsall Common, Coventry	59/63 [A]	-	45/47 [C]	Day: Earthworks; Night: Install railway protection barrier	NA	6	R	T	-	-	N	-	-	
173409	Grovefield Crescent, Balsall Common, Coventry	52/58 [A]	-	38/40 [C]	Day: Topsoil strip; Night: Install railway protection barrier	NA	27	R	T	-	-	N	-	-	
173544	Lavender Hall Lane, Berkswell, Coventry	47/53 [A]	-	-	Day: Vegetation clearance; Night: Balsall Common viaduct deck	NA	8	R	T	-	-	N	-	-	
173557	Ram Hall, Baulk Lane, Berkswell, Coventry	53/60 [A]	-	40/42 [C]	Day: Vegetation clearance; Night: Install railway protection barrier	NA	1	R	T	-	-	N	-	-	
174003	Lavender Hall Lane,	47/54 [A]	-	-	Day: Vegetation clearance	NA	18	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Berkswell, Coventry														
174338	Spencers Lane, Berkswell, Coventry	45/51 [A]	-	-	Day: Vegetation clearance	NA	2	R	T	-	-	N	-	-	
174501	Watson Way, Balsall Common, Coventry	52/57 [A]	-	40/42 [C]	Day: Earthworks; Night: Install railway protection barrier	NA	30	R	T	-	-	N	-	-	
174675	Wilmot Close, Balsall Common, Coventry	46/54 [A]	-	<35/<35 [C]	Day: Lavender Hall Lane overbridge pile breakdown; Night: Install railway protection barrier	NA	8	R	T	-	-	N	-	-	
174783	Eborne Croft, Balsall Common, Coventry	51/56 [A]	-	38/39 [C]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	45	R	T	-	-	N	-	-	
175211	Bradnocks Marsh Lane, Hampton-In-Arden, Solihull	46/54 [B]	-	-	Day: Vegetation clearance	NA	8	R	T	H	-	N	-	-	
175336	Turnpike Close, Balsall Common, Coventry	46/51 [A]	-	<35/35 [A]	Day: Earthworks; Night: Install railway protection barrier	NA	65	R	T	L	-	N	-	-	
175597	Grovefield Crescent, Balsall Common, Coventry	46/50 [A]	-	35/36 [C]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	30	R	T	-	-	N	-	-	
175827	Lavender Hall Lane,	46/51 [A]	-	-	Day: Vegetation clearance	NA	4	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Berkswell, Coventry														
176022	Church Lane, Berkswell, Coventry	47/52 [A]	-	-	Day: Vegetation clearance	NA	2	R	T	-	-	N	-	-	
176128	Park Farm, Mercote Hall Lane, Meriden, Coventry	40/47 [A]	-	-	Day: Vegetation clearance	NA	2	R	T	-	-	N	-	-	
176243	Pasture Farm, Diddington Lane, Hampton-in-Arden	63/68 [A]	49/54 [B]	49/54 [C]	Day: Pasture Farm accommodation overbridge pile breakdown; Eve: A45 Coventry Road overbridge piling; Night: A45 Coventry Road overbridge piling	A	1	R	T	-	-	N	D 7	-	~
178468	Diddington Lane, Hampton-In-Arden, Solihull	48/55 [B]	<40/<40 [C]	<35/<35 [C]	Day: Vegetation clearance; Eve: Road construction; Night: Road construction	NA	11	R	T	H	-	N	-	-	
178545	B4102 Meriden Road, Hampton-In-Arden, Solihull	47/54 [A]	-	-	Day: Earthworks	NA	13	R	T	-	-	N	-	-	
178766	B4102 Meriden Road, Hampton-In-Arden, Solihull	42/49 [C]	-	-	Day: Earthworks	NA	22	R	T	H	-	N	-	-	
179003	B4102 Meriden Road, Hampton-In-Arden, Solihull	45/50 [A]	-	-	Day: Earthworks	NA	21	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
179084	B4102 Meriden Road, Hampton-In-Arden, Solihull	48/54 [A]	-	-	Day: Earthworks	NA	10	R	T	-	-	N	-	-	
179119	The Crescent, Hampton-In-Arden, Solihull	48/53 [A]	-	-	Day: Earthworks	NA	12	R	T	-	-	N	-	-	
179384	The Crescent, Hampton-In-Arden, Solihull	44/49 [A]	-	-	Day: Earthworks	NA	16	R	T	-	-	N	-	-	
180256	The Crescent, Hampton-In-Arden, Solihull	45/51 [A]	-	-	Day: Earthworks	NA	12	R	T	-	-	N	-	-	
180470	Nesfield Grove, Hampton-In-Arden, Solihull	48/54 [A]	-	-	Day: Earthworks	NA	11	R	T	-	-	N	-	-	
180567	Lapwing Drive, Hampton-In-Arden, Solihull	48/54 [A]	-	-	Day: Earthworks	NA	38	R	T	-	-	N	-	-	
180759	Nesfield Grove, Hampton-In-Arden, Solihull	48/54 [A]	-	-	Day: Earthworks	NA	19	R	T	-	-	N	-	-	
180945	Old Station Road, Hampton-In-Arden, Solihull	46/54 [A]	<40/44 [C]	39/44 [C]	Day: Vegetation clearance; Eve: Road construction; Night: Road construction	NA	24	R	T	-	-	N	-	-	
181687	Arden House, A452 Kenilworth Road, Hampton-In-Arden,	59/66 [A]	-	-	Day: Earthworks	A	1	R	T	-	-	N	D 1	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Solihull														
181780	Diddington Lane, Hampton-In-Arden, Solihull	50/57 [A]	<40/<40 [A]	<35/<35 [B]	Day: Earthworks; Eve: Road construction; Night: Road construction	NA	13	R	T	-	-	N	-	-	
181854	Diddington Lane, Hampton-In-Arden, Solihull	51/57 [A]	-	-	Day: Fencing	NA	9	R	T	-	-	N	-	-	
181976	Patrick Farm, B4102 Meriden Road, Hampton-In-Arden, Solihull	65/76 [A]	-	-	Day: B4102 Meriden Road underbridge pile breakdown	S	1	R	T	-	-	Y	D 17	NI	CSV23-Do1
182018	Meridan Mill Farm, B4102 Meriden Road, Hampton-in-Arden	52/56 [A]	-	-	Day: Earthworks	NA	2	R	T	-	-	N	-	-	
182073	Diddington Farm, Diddington Lane, Meriden, Coventry	55/60 [A]	44/48 [B]	44/48 [C]	Day: Site clearance; Eve: A45 Coventry Road overbridge piling; Night: A45 Coventry Road overbridge piling	NA	1	R	T	-	-	N	-	-	
182139	Mouldings Green Farm, A452 Kenilworth Road, Meriden, Coventry	48/53 [A]	-	-	Day: Earthworks	NA	2	R	T	-	-	N	-	-	
182427	Mercote Mill Farm, A452 Kenilworth Road, Hampton-In-Arden,	53/58 [A]	-	-	Day: Earthworks	NA	1	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Solihull														
182461	Marsh Farm and Mercote Cottages , A452 Kenilworth Road, Hampton-In-Arden, Solihull	64/71 [A]	-	-	Day: Earthworks	A	3	R	T	-	-	N	D 12	-	CSV23-Co3
182587	Hornbrook Farm, Cornets End Lane, Meriden, Coventry	52/56 [A]	-	-	Day: Watercourse realignment	NA	2	R	T	-	-	N	-	-	
200232	Old Waste Lane, Balsall Common, Coventry	53/57 [A]	-	37/40 [B]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	8	R	T	-	-	N	-	-	
202158	Truggist Lane, Berkswell, Coventry	53/57 [A]	-	41/44 [B]	Day: Carol Green Rail underbridge pile breakdown; Night: Install railway protection barrier	NA	3	R	T	-	-	N	-	-	
202319	Hob Lane, Balsall Common, Coventry	44/49 [A]	-	-	Day: Retaining wall construction	NA	4	R	T	-	-	N	-	-	
202645	Hob Lane, Balsall Common, Coventry	44/49 [A]	-	<35/<35 [B]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	11	R	T	-	-	N	-	-	
203030	Old Waste Lane, Balsall Common, Coventry	50/55 [A]	-	38/41 [B]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	8	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
203125	Old Waste Lane, Balsall Common, Coventry	50/55 [A]	-	40/42 [B]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	9	R	T	-	-	N	-	-	
203260	Spencers Lane, Berkswell, Coventry	48/52 [C]	-	<35/37 [C]	Day: Retaining wall construction; Night: Install railway protection barrier	NA	14	R	T	H	-	N	-	-	
203285	Spencers Lane, Berkswell, Coventry	47/51 [A]	-	<35/<35 [A]	Day: Retaining wall construction; Night: Install railway protection barrier	NA	3	R	T	-	-	N	-	-	
203382	Truggist Lane, Berkswell, Coventry	51/54 [A]	-	36/38 [C]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	2	R	T	-	-	N	-	-	
203420	Truggist Lane, Berkswell, Coventry	54/58 [A]	-	39/41 [C]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	4	R	T	-	-	N	-	-	
203453	Truggist Lane, Berkswell, Coventry	60/68 [A]	-	50/55 [B]	Day: Fencing; Night: Install railway protection barrier	A	2	R	T	-	-	N	D 1; N 1	-	CSV23-Co1
203499	Truggist Lane, Berkswell, Coventry	51/55 [A]	-	37/39 [C]	Day: Earthworks; Night: Install railway protection barrier	NA	2	R	T	-	-	N	-	-	
203578	Hodgetts Lane, Berkswell, Coventry	51/55 [A]	-	36/38 [A]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	2	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
203600	Hodgetts Lane, Berkswell, Coventry	55/59 [A]	-	40/42 [A]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	1	R	T	-	-	N	-	-	
203611	Hodgetts Lane, Berkswell, Coventry	54/58 [A]	-	35/38 [A]	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	NA	2	R	T	-	-	N	-	-	
203706	Hodgetts Lane, Berkswell, Coventry	57/63 [A]	-	41/43 [A]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	2	R	T	-	-	N	-	-	
203737	Hodgetts Lane, Berkswell, Coventry	54/60 [A]	-	<35/<35 [A]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	3	R	T	-	-	N	-	-	
203770	Hodgetts Lane, Berkswell, Coventry	51/56 [A]	-	38/39 [C]	Day: Earthworks; Night: Carol Green Rail underbridge concrete box	NA	8	R	T	-	-	N	-	-	
203808	Truggist Lane, Berkswell, Coventry	58/64 [A]	-	48/50 [C]	Day: Fencing; Night: Install railway protection barrier	NA	2	R	T	-	-	N	-	-	
203998	Baulk Lane, Berkswell, Coventry	47/52 [A]	-	35/38 [A]	Day: Vegetation clearance; Night: Install railway protection barrier	NA	10	R	T	-	-	N	-	-	
700550	Meeting House Lane, Balsall Common	43/48 [A]	-	<35/36 [A]	Day: Filling; Night: Carol Green Rail underbridge concrete box	NA	121	R	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
700551	Balyleys Brook, Baulk Lane, Berkswell	53/60 [A]	-	37/41 [B]	Day: Vegetation clearance; Night: Install railway protection barrier	NA	1	R	T	-	-	N	-	-	
700552	Four Winds, A452 Kenilworth Road, Balsall Common	50/55 [A]	-	-	Day: Utility diversions	NA	1	R	T	-	-	N	-	-	
700554	Berkswell Hall, Berkswell	45/51 [A]	-	-	Day: Vegetation clearance	NA	16	R	T	-	-	N	-	-	
700555	Willow Cottage, A452 Kenilworth Road, Balsall Common	58/62 [B]	-	-	Day: Vegetation clearance	NA	5	R	T	H	-	N	-	-	
700556	Mercote Lodge and Hornbrook Cottage, A452 Kenilworth Road, Balsall Common	64/71 [A]	-	-	Day: Earthworks	A	2	R	T	H	-	Y	D 13	-	CSV23-Co3

Appendix SV-003-023

Table 4: Assessment of construction noise at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
160582	Brickmaker's Arms Bed and Breakfast, Station Road, Balsall Common, Coventry	55/60	-	44/46	Day: Filling; Night: Carol Green Rail underbridge concrete box	B	1	G4	T	H	-	N	-	-	
161197	Offices, Marsh House Farm Lane, Bradnocks Marsh, Solihull	48/53	-	-	Day: Vegetation clearance	B	1	G5	T	H	-	N	-	-	
161426	Holly Acre Lodge, A452 Kenilworth Road, Hampton-In-Arden, Solihull	58/67	-	-	Day: Utility diversions	B	1	G5	T	-	-	N	-	-	
161465	Solihull Garden Centre, A452 Kenilworth Road, Hampton-In-Arden, Solihull	53/60	-	-	Day: Vegetation clearance	B	3	G5	T	H	-	N	-	-	
161483	Bibury House guest house, A452 Kenilworth Road, Hampton-In-Arden, Solihull	60/69	-	-	Day: Utility diversions	B	1	G4	T	H	-	N	D 3	-	CSV23-No2
161734	Guest Houses, A452 Kenilworth Road, Hampton-In-Arden, Solihull	55/60	-	-	Day: Vegetation clearance	B	2	G4	T	-	-	N	-	-	
164793	Premier Inn hotel, A452 Kenilworth Road, Balsall	46/52	-	<35/<35	Day: Lavender Hall Lane overbridge pile breakdown;	B	1	G4	T	H	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Common, Coventry				Night: Install railway protection barrier										
164793	Beefeater Restaurant, A452 Kenilworth Road, Balsall Common, Coventry	46/52	-	-	Day: Lavender Hall Lane overbridge pile breakdown	B	1	G5	T	H	-	N	-	-	
164857	Avonlea guest house, A452 Kenilworth Road, Balsall Common, Coventry	48/55	-	<35/<35	Day: Vegetation clearance; Night: Carol Green Rail underbridge wing walls	B	1	G4	T	-	-	N	-	-	
167012	Balsall Common Dental Practice, Station Road, Balsall Common, Coventry	<40/43	-	-	Day: Carol Green Rail underbridge pile breakdown	B	1	G4	T	-	-	N	-	-	
167012	Retail (medical), A452 Kenilworth Road, Balsall Common, Coventry	<40/43	-	-	Day: Carol Green Rail underbridge pile breakdown	B	2	G5	T	-	-	N	-	-	
167669	Oaktrees Day Centre, Gorton Croft, Balsall Common, Coventry	<40/44	-	-	Day: Vegetation clearance	B	1	G4	T	-	-	N	-	-	
167669	Retail units, A452 Kenilworth Road, Balsall Common, Coventry	<40/44	-	-	Day: Vegetation clearance	B	3	G5	T	-	-	N	-	-	
167824	Retail units, A452 Kenilworth Road, Balsall	52/64	-	-	Day: Vegetation clearance	B	2	G5	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Common, Coventry														
167944	Car Sales, A452 Kenilworth Road, Balsall Common, Coventry	51/59	-	-	Day: Vegetation clearance	B	2	G5	T	H	-	N	-	-	
168004	Fisheries café and office, Lavender Hall Lane	60/70	-	-	Day: Utility removal Lavender Hall Lane	B	1	G5	T	-	-	N	-	-	
172357	Balsall Common Methodist Church, Station Road, Balsall Common, Coventry	50/54	-	-	Day: Filling	B	1	G3	T	H	-	N	-	-	
172944	British Legion, Station Road, Balsall Common, Coventry	58/63	-	-	Day: Earthworks	B	1	G3	T	-	-	N	D 32	-	CSV23-No1
173014	Balsall Common shops, Station Road, Balsall Common, Coventry	47/52	-	-	Day: Earthworks	B	10	G5	T	L	-	N	-	-	
173395	Autotrade Centre and Public House	59/63	-	-	Day: Earthworks	B	2	G5	T	-	-	N	-	-	
174003	Berkswell Village Museum and Hall, Berkswell, Coventry	47/54	-	-	Day: Vegetation clearance	B	1	G3	T	-	-	N	-	-	
174003	Retail unit / tea shop, Lavender Hall Lane, Berkswell, Coventry	47/54	-	-	Day: Vegetation clearance	B	1	G5	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
175336	Library and Haigs Hotel, A452 Kenilworth Road, Balsall Common, Coventry	46/51	-	<35/35	Day: Earthworks; Night: Install railway protection barrier	B	4	G4	T	L	-	N	-	-	
176022	St John Baptist Church, Church Lane, Berkswell, Coventry	47/52	-	-	Day: Vegetation clearance	B	1	G3	T	-	-	N	-	-	
176022	Berkswell Primary School, Church Lane, Berkswell, Coventry	47/52	-	-	Day: Vegetation clearance	B	1	G4	T	-	-	N	-	-	
176243	Commercial units, Pasture Farm, Diddington Lane, Hampton-in-Arden	63/68	-	-	Day: Pasture Farm accommodation overbridge pile breakdown	B	3	G5	T	-	-	N	-	-	
181687	Lincoln Farm café and offices, A452 Kenilworth Road, Hampton-In-Arden, Solihull	59/66	-	-	Day: Earthworks	B	1	G5	T	-	-	N	-	-	
181976	Commercial units Patrick Farm, B4102 Meriden Road, Hampton-In-Arden, Solihull	65/76	-	-	Day: B4102 Meriden road underbridge pile breakdown	B	9	G5	T	-	-	Y	D 6	-	CSV23-No3
182018	Commercial unit, Meridan Mill Farm, A452 Kenilworth Road,	52/56	-	-	Day: Earthworks	B	1	G5	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Meriden, Coventry														
182073	Commercial units, Diddington Farm Diddington Lane, Meriden, Coventry	55/60	-	-	Day: Site clearance	B	1	G5	T	-	-	N	-	-	
182120	The Island Project School, Diddington Lane, Meriden, Coventry	53/59	40/45	-	Day: Earthworks; Eve: A45 Coventry Road overbridge piling	B	1	G4	S	-	-	N	D 4	-	CSV23-No4
182139	Offices and commercial units Mouldings Green Farm, A452 Kenilworth Road, Meriden, Coventry	48/53	-	-	Day: Earthworks	B	5	G5	T	-	-	N	-	-	
182587	Quarry Building, Cornets End Lane, Meriden, Coventry	52/56	-	-	Day: Watercourse realignment	B	1	G5	T	-	-	N	-	-	
203420	Guest House, Truggist Lane, Berkswell, Coventry	54/58	-	39/41	Day: Retaining wall construction; Night: Carol Green Rail underbridge concrete box	B	1	G4	T	-	-	N	D 19	-	*
700550	Doctors Surgery, Meeting House Lane, Balsall Common	43/48	-	-	Day: Filling	B	3	G4	T	-	-	N	-	-	
700550	Retail units, Station Road, Balsall Common	43/48	-	-	Day: Filling	B	14	G5	T	-	-	N	-	-	
700552	Turf Supplier Offices, A452 Kenilworth Road,	50/55	-	-	Day: Utility diversions	B	1	G5	T	-	-	N	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Balsall Common														
700565	Balsall Common health centre, Balsall Common, Coventry	54/59	-	-	Day: Earthworks	B	1	G4	T	H	-	N	-	-	

Airborne sound: indirect effects

- 4.3.7 Construction road traffic associated with the construction phases of the Proposed Scheme would generate airborne noise. Based upon traffic information for the Proposed Scheme, the change in traffic noise level at a reference distance of 10m from the edge of the nearside carriageway resulting from the presence of construction traffic for a given road has been predicted. Data has been provided for four representative periods during the works (quarter 4 2018, quarter 1 2019, quarter 4 2019 and quarter 2 2022). The results for potentially significant road links are presented in Table 5.
- 4.3.8 Explanation of the information within Table 5 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:



Where the significant effect column is highlighted, then a significant effect is identified on nearby communities or individual receptors

Change values



Yellow denotes a minor impact – a change is of 3-5 dB or 1-3dB where a high existing sound level is identified



Orange denotes a moderate impact – a change is of 5-10 dB or 3-5dB where a high existing sound level is identified



Red denotes a major impact – a change is of >10 dB or >5dB where a high existing sound level is identified

Table 5: Assessment of construction traffic noise levels

Road name	Link	Future baseline sound level (dB)	Future baseline sound level + construction traffic (dB) quarter 4 2018	Future baseline sound level + construction traffic (dB) quarter 1 2019	Future baseline sound level + construction traffic (dB) quarter 4 2019	Future baseline sound level + construction traffic (dB) quarter 2 2022	Change (dB) quarter 4 2018	Change (dB) quarter 1 2019	Change (dB) quarter 4 2019	Change (dB) quarter 2 2022	Significant effect
		Daytime L _{pAeq,16hr} 0700-23:00 free-field	Daytime L _{pAeq,16hr} 0700-2300 free-field	Daytime L _{pAeq,16hr} 0700-2300 free-field	Daytime L _{pAeq,16hr} 0700-2300 free-field	Daytime L _{pAeq,16hr} 0700-2300 free-field					
Park Lane between Lavender Hall Lane and A452 Kenilworth Road	BC5	54.7	62.8	57.7	56.5	56.5	+8.1	+3.0	+1.8	+1.8	
Hallmeadow Road between Lavender Hall Lane and A452 Kenilworth Road	BC8	57.6	53.9	57.6	57.6	57.6	-3.7	0	0	0	
Lavender Hall Lane between Hallmeadow Road and A452 Kenilworth Road	BC11	62.0	57.4	62.0	62.0	62.0	-4.6	0	0	0	

4.4 Assessment of significant effects

Residential receptors: direct effects – individual dwellings

- 4.4.1 Taking account of the avoidance and mitigation measures, one residential building (Patrick Farm, B4102 Meriden Road) is forecast to experience noise levels higher than the noise insulation trigger levels as defined in the draft CoCP. For daytime construction the trigger level is 75dB⁵ measured outdoors, or the existing ambient if this is already above this level.
- 4.4.2 At Patrick Farm (CSV23-Do1) the draft CoCP trigger level is predicted to be exceeded during the day for one month in 2018 during one phase of the construction of the adjacent B4102 Meriden Road underbridge.
- 4.4.3 The mitigation measures, including noise insulation, will reduce noise inside all dwellings, including Patrick Farm, such that it does not reach a level where it would significantly affect¹ residents.

Residential receptors: direct effects –communities

- 4.4.4 The avoidance and mitigation measures in this area will avoid airborne construction noise adverse effects¹ on the majority of receptors and communities. Residual temporary noise or vibration effects are identified later in this section.
- 4.4.5 With regard to noise outside dwellings, the assessment of temporary effects takes account of construction noise relative to existing sound levels.
- 4.4.6 In locations with lower existing sound levels⁶, construction noise adverse effects¹ are likely to be caused by changes to noise levels outside dwellings. These may be considered by the local community as an effect on the acoustic character of the area and hence be perceived as a change in the quality of life. These adverse effects are considered to be significant when assessed on a community basis taking account of the local context⁶ as identified in Table 6.
- 4.4.7 Vibro-compaction is likely to result in appreciable ground-borne vibration at a small number of individual dwellings, situated closest to this activity, resulting in minor adverse effects at these properties⁷. These receptors will also be exposed to appreciable noise from the construction of the Proposed Scheme. The significance of the identified vibration effects has been assessed in combination with the airborne noise also identified at these receptors.
- 4.4.8 Table 6 presents a summary of the likely residual significant direct effects on residential communities. The typical and worst case construction noise levels are reported to the nearest 5dB. The number of dwellings in each community has also been rounded to the nearest 5-10 properties.

⁵ L_{pAeq,0800-1800} measured at the façade, outdoors, or the existing ambient if this is already above this level

⁶ Further information is provided in Volume 5: Appendix SV-001-000

⁷ Resulting in a low probability of adverse comment. There is no risk of damage, even cosmetic, to buildings

Table 6: Direct adverse effects on residential communities and shared open areas that are considered to be significant on a community basis

Significant effect number	Type of significant effect	Time of day	Location	Cause (construction activities)	Assumed approximate duration of impact and details
CSV23-Co1	Construction noise	Day and night	Berkswell. Approximately 10 dwellings off Truggist Lane, during the day, 2 of which also experience night time effects	Day: fencing, vegetation clearance, topsoil stripping, earthworks, re-soiling and works at the Balsall Common viaduct with typical and highest daytime monthly noise levels of around 60-65dB and 68-70dB ⁸ respectively. Night: installation of the railway protection barrier at Carol Green Rail underbridge with typical and highest noise levels of around 50 and 55dB ⁹	Ranging from 1 to 16 months
CSV23-Co2	Construction noise	Day	Berkswell. Approximately 5 dwellings on Lavender Hall Lane	Utility diversions, site clearance, and Lavender Hall Lane overbridge works with typical and highest monthly noise levels of around 60dB and 70dB ⁸	6 months
CSV23-Co3	Construction noise and vibration	Day	Balsall Common. Approximately 10 dwellings on A452 Kenilworth Road, north of Balsall Common for construction noise, 2 of which also experience vibration effects	Fencing, utility diversions, vegetation clearance, watercourse realignment works, earthworks, road construction, and use of the haul route with typical and highest monthly noise levels of around 60-65dB and 69-70dB ¹⁰ respectively. Worst case VDV vibration levels are around 0.3m/s ^{1.75}	Ranging from 3 to 13 months

4.4.9 Arden House on A452 Kenilworth Road, represented by assessment location 181687, is in the vicinity of the community represented by CSV23-Co3 but is set further back from A452 Kenilworth Road. The daytime impact criterion is exceeded by 1dB for one month in 2018. Based on the limited magnitude and duration of the impact this property has not been included within the community effect.

Residential receptors: indirect effects

4.4.10 Significant noise effects on residential receptors arising from construction traffic are unlikely to occur in this area.

4.4.11 A moderate increase in traffic noise levels is predicted on Park Lane during one of the four selected representative construction traffic scenarios. However, only one

⁹ Night-time: equivalent continuous sound level at the facade, $L_{pAeq, 2300-0700}$

¹⁰ Daytime: equivalent continuous sound level at the facade, $L_{pAeq, 0700-1900}$

residential property, Final Home, is located on Park Lane, Top Lodge is located on the junction with the A452 Kenilworth Road and is exposed to greater traffic noise from the A452 Kenilworth Road. The closure of Lavender Hall Lane for part of the works results in the transfer of traffic onto Park Lane, the diversion will be in place for 12 months. Taking account of the magnitude of the predicted traffic noise levels and the limited number of affected receptors a significant adverse effect is considered to be unlikely.

- 4.4.12 A minor decrease in traffic noise levels is predicted on a short section of Hallmeadow Road and Lavender Hall Lane for one of the selected representative construction traffic scenarios. No residential properties are located along the affected section of Hall Meadow Road, and a total of around five properties on the affected section of Lavender Hall Lane, all of which are close to the junction with the A452 Kenilworth Road. Taking account of the magnitude of the predicted traffic noise levels and the limited number of affected receptors a significant beneficial effect is considered to be unlikely.

Non-residential receptors: direct effects

Significant construction noise or vibration effects have been identified on a worst case basis on the following non-residential receptors the typical and worst case noise levels are reported to the nearest 5dB:

- British Legion club, Station Road, Balsall Common (CSV23-No1). Significant noise effects¹ have been identified during the daytime with noise levels rising at times to around 65dB⁸. The duration of the impact is approximately 32 months commencing in 2017 due to a range of construction activities including fencing, vegetation clearance, topsoil strip, works at Balsall Common viaduct, earthworks and re-soiling. However, the predicted construction noise levels are fairly low and the main usage of the club is likely to be in the evenings and weekends, therefore the effect may be more limited than identified;
- Bibury House guest house on A452 Kenilworth Road north of Balsall Common (CSV23-No2). Significant noise effects have been identified during the daytime with noise levels rising at times to around 70dB⁸. The duration of the impact is approximately three months commencing in 2018 due to utility diversions and construction of the new A452 Kenilworth Road. However, the main usage of the guest house is likely to be during the evening and night. No evening or night works are proposed in the vicinity, therefore the effect may be more limited than identified;
- commercial units at Patrick Farm, B4102 Meriden Road (CSV23-No3). Significant noise effects have been identified during the daytime with noise levels rising at times to around 75dB⁸. The duration of the impact is approximately six months commencing in 2017 due to earthworks and the construction of the adjacent B4102 Meriden Road underbridge; and
- The Island Project school for autistic children at Diddington Hall (CSV23-No4). Significant noise effects have been identified during the daytime with noise levels rising at times to around 60dB⁸. The duration of the impact is

approximately four months commencing in 2017 due to vegetation clearance and earthworks along the route.

- 4.4.13 At the guest house on Truggist Lane, Berkswell, represented by assessment location 203420, the daytime impact criterion is exceeded by 1-2dB. Based on the limited magnitude of the impact and the low absolute construction noise levels, a significant effect is considered to be unlikely.

Non-residential receptors: indirect effects

- 4.4.14 Significant noise effects on non-residential receptors arising from construction traffic are unlikely to occur in this area.

Cumulative effects from the Proposed Scheme and other committed development.

- 4.4.15 This assessment has considered the potential cumulative construction noise effects of the proposed scheme and other committed developments¹¹. In this area, it is not anticipated that there will be any developments built at the same time as the Proposed Scheme and accordingly, construction noise or vibration from the Proposed Scheme is unlikely to result in any significant cumulative noise effects.

¹¹ Refer to Volume 5: Appendix CT-004-000

References

North Warwickshire Borough Council (NWBC), (2006), North Warwickshire Local Plan, NWBC

Solihull Metropolitan Borough Council (SMBC), (2006), Solihull Unitary Development Plan 2006, SMBC, Solihull

Solihull Metropolitan Borough Council (SMBC), (2012), Solihull Draft Local Plan 2012, SMBC, Solihull